



# United States Department of the Interior

NATIONAL PARK SERVICE  
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J. I. Palmer, Jr.  
Regional Administrator  
U.S. Environmental Protection Agency, Region 4  
Atlanta Federal Center  
61 Forsyth Street, SW  
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FEB 27 2004

RE; Air Quality Designated areas for the 8-hour ozone National  
Ambient Air Quality Standards (NAAQS) at Great Smoky  
Mountains National Park

Dear Mr. Palmer:

The National Park Service (NPS) has been following Federal and state activities related to the implementation of the new 8-hour ozone standard, including proposed rules by the Environmental Protection Agency (EPA) on various alternatives for designating and classifying nonattainment areas that are violating the ozone standard. This letter sets forth issues for your consideration relative to the nonattainment area boundaries proposed by the State of Tennessee.

The Great Smoky Mountains National Park (Park), a mandatory Class I Federal area, transverses the states of North Carolina and Tennessee and is known for a variety of plant and animal species. The Park is the most visited national park in the U.S., receiving 10 million visits annually. Millions of park visitors and hundreds of park employees are exposed to unhealthy air each year when hiking, biking, backpacking, jogging, etc., along the Park roads and trails. Many Park visitors expect clean, healthy air when they visit, yet find out that air quality may be worse in the park than where they came from. The National Park Service responsibilities to protect air quality derive from the 1916 Organic Act and the Clean Air Act (CAA). The CAA specifies the NPS's affirmative responsibility to protect Class I areas that it manages.

The North Carolina side of the Park is located in parts of Swain and Haywood Counties. The North Carolina Department of Environment and Natural Resources has recommended that the entire North Carolina side of the Park be designated nonattainment. EPA agreed with the State of North Carolina's nonattainment boundary designation in their December 3, 2003, letter to Bill Ross, Secretary of North Carolina Department of Environment and Natural Resources. The National Park Service concurs with the State of North Carolina on the recommendations provided to the EPA for air quality designated areas for 8-hour ozone standards as nonattainment.

Conversely, the National Park Service is concerned about the appropriateness of the nonattainment area boundary recommendations by the State of Tennessee (State) for the Park as indicated in a July 14, 2003, letter to your office. The NPS disagrees with the State's recommendation to assign two separate designations of nonattainment based upon high and low elevation monitors, and we recommend EPA keep the Tennessee-side of the Park in the Knoxville MSA ozone nonattainment area,

We are aware of EPA's response to the State's recommendations as provided in a December 3, 2003, letter to Tennessee Department of Environment and Conservation Commissioner Betsy Child. We noted that EPA makes no mention of separating the Knoxville nonattainment area by elevation or Park boundary. We are hopeful that final recommendations by EPA continue to reflect that position and to include the Park in the Knoxville nonattainment area.

Nationally, the NPS is a directly affected stakeholder in the State/EPA process of defining ozone nonattainment areas where Park units under our jurisdiction are at least partially included in the designation decisions. In several respects, many NPS-managed lands are similar to tribal lands in that they may be considered rural in setting, are often impacted by ozone or ozone precursor transport, and often have negligible ozone-relevant emissions contained within their boundaries, especially when compared to emissions in the areas surrounding these lands. Our concerns for treatment of park units under the CAA section 107(d) process range from splitting up areas of a park that lie in a single air shed to isolation of Park areas on paper from relatively nearby ozone source areas regardless of the severity of the contribution of the latter to ozone levels affecting Parks' air quality and ozone-sensitive resources.

Another responsibility of the NPS is to preserve, protect, and conserve the scenery and natural resources unimpaired for future generations to enjoy. Ozone levels at the Park indicate that they are sufficient to cause visible injury, growth reductions, and species composition changes to vegetation and can represent ozone exposures below the 8-hour ozone standard of 85 ppb. Research suggests that 8-hour ozone design values should be as low as 75 ppb to protect sensitive vegetation.

The NPS has developed a few guiding principles as general criteria for treatment of NPS units which have monitored violations of the 8-hour ozone standard. These are provided for EPA's use in deciding the appropriate extent of the nonattainment area that encompasses the Park.

- *For an affected park unit in or near an urban (e.g., MSA), 8-hour ozone nonattainment area, the park area should be coupled with the metropolitan nonattainment area. The park area may later be de-coupled from the urban portion if and when the urban area or the park meets the standard and the other does not.* The Tennessee-side of the Park consists of three counties: Sevier, Blount and Cocke. According to census designations, Sevier and Blount counties are part of the Knoxville MSA. Blount County includes the Park's Look Rock ozone monitoring

station which exceeds the ozone standard. Look Rock is not a high elevation site at 2,600 feet, but rather is a topographically exposed ridge, perched downwind from Knoxville. As long as Knoxville has a problem attaining the standard, the Park will also. Separating the Park from Knoxville due to elevational or Park boundary differences does not help the Park solve its air pollution problems sooner.

*Unless a park area is clearly in more than one air shed, with ozone air quality being markedly different between air sheds, the entire park should share the same designation status.* Nearly every day that Knoxville has an exceedance, the Park has one. The design values for Knoxville and the Park are nearly identical and follow nearly identical trends. In fact, the 2001-2003 design value for the three park ridge-top sites (e.g., Look Rock, Cove Mountain, and Clingmans Dome) and Knoxville are all 92 ppb. The State of Tennessee meteorologist is also aware of this relationship and now forecasts one daily index for both the Knoxville area and the Park because of the nearly identical and predictable ozone concentrations we observe. Ozone levels (and precursor emissions) are much greater on the Tennessee-side of the park versus the North Carolina-side due to Knoxville's direct daily influence on the Park. The Park's topography, not just elevation, contributes to chronic, non-diurnal patterns of ozone, so a bad air day for the park is a bad air day and night. Based on recent research, the Knoxville area can contribute 20-50 percent of the ozone on bad air days at the Park.

In addition, a NPS-funded park-wide passive ozone monitoring and research study was conducted during a 20-week period in the months of May through September 2000 and included monitoring in the Cocke County part of the Park. The results of the study indicated that average weekly ozone exposures in Cocke County were high and comparable to the continuous monitoring stations on the ridgetops in Blount and Sevier Counties (Look Rock, Cove Mountain, and Clingmans Dome). The weekly results also exhibited conclusive non-diurnal average patterns that are indicative of exposed ridgetops. This pattern of ozone is identical to those areas of the Park that do not meet the ozone standard. Therefore, the NPS recommends that the Cocke County section of the Park also be included in the Knoxville nonattainment designation.

Except in very limited circumstances, park areas should not be designated as rural transport nonattainment areas under CAA Section 182(h). One option under EPA's proposed implementation rule may allow areas classified as "rural transport areas" to be separated (on paper) from nearby or adjacent urban nonattainment areas regardless of the severity of the contribution of the latter to ozone levels affecting these areas' air quality. A major concern with such a classification for a park area like Great Smoky Mountains National Park is the creation of a planning off-ramp whereby state and local agencies need not consider practicable methods to improve ozone air quality in the Park. If EPA should decide to allow the isolation of nonattainment park areas from nearby metropolitan areas in the ongoing designation process, the uncertainties related to these parks attaining the ozone standard are increased. There is a need for State or local air quality planning agencies to consider the effects of urban area pollution transport on nearby rural

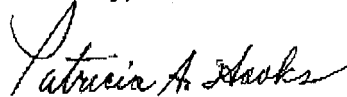
nonattainment areas in the development of their control strategy regardless of classifications under Sections 181(a) or 182(h).

The reasoning behind these principles is based in part on current guidance from EPA regarding the criteria (i.e., 11 factors) to be used by states and tribes to make nonattainment boundary recommendations different from EPA's presumptive boundary definitions (i.e., the larger of the MSA, the consolidated MSA, or the existing 1-hour ozone nonattainment boundaries). We also factored in an "administrative ease" component that would assist the NPS in administering park management programs in parks that are affected by nonattainment area designation. Perhaps most important is consideration of the CAA's *specific* mandate in Section 107(d)(1) whereby States are to designate as nonattainment *"any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant."*

The National Park Service remains an active participant in the Knoxville and Asheville Early Action Compact efforts and is a member of the Regional Clean Air Coalition (RCAC) looking at early measures to reduce nitrogen oxide emissions that are needed to attain the standard and help to protect the park. We will continue to support these efforts and seek air quality improvements that protect public health and the environment. Your favorable review of these recommendations will be appreciated.

Thank you for this opportunity to outline our concerns about this important issue of ozone nonattainment designation and its effect on Great Smoky Mountains National Park in Tennessee and North Carolina. It is the NPS's desire to continue to be part of this important process that will, impact our ability to protect park resources. We are available to meet with you or the appropriate staff to discuss these concerns in more detail as you work to formulate a final decision regarding the boundaries of affected nonattainment areas. If you have any questions, please contact Jim Renfro, Great Smoky Mountains National. Park, at (865) 436-1708 or Denesia Cheek, Southeast Regional Office, at (404) 562-3113 ext. 510.

Sincerely,



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